

Faba Bean, Irrigated Spring Sowing, HRZ (Cressy), Tasmania

Authors

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Aim

To evaluate the optimum sowing rate for different faba bean varieties sown in spring.

Treatments

Varieties: See Table 2.

Sowing rates: See Table 2.

Table 1. Site details

Cressy		
Sowing date	29 August	
Row spacing (cm)	20	
Fertiliser (kg/ha) ¹	60	
Monthly irrigation (mm)	September	35
	October	12
	November	41
	December	10

¹ MAP (9.2, 20.2, 0, 2.7)

Results and Interpretation

- Key messages: The irrigated spring-sown faba beans produced higher yields with an average of 6.9 t/ha across the treatments (Table 3). High variability in the trial suggests these numbers may be exaggerated, but header data from the surrounding paddock indicate that up to 6 t/ha grain yields were achieved by the grower in some parts of the paddock.
- Grain yields increased from 5.8 to 7.8 t/ha as the plant numbers increased from 14 to 31 plants/m² (Table 2). However, due to the variability between replicates the results were not significant.
- At a given sowing rate PBA Zahra and PBA Amberley had different plant densities due to differences in seed sizes. Target plant densities should be calculated based on seed size and germination rate to provide accurate predictions of plant numbers.
- These initial results suggest that irrigated spring-sown beans have a remarkable yield potential. They have a great potential to fit in to the complex rotations of Tasmanian farming systems and there is a growing demand for faba beans in the commercial fish feed industry. Faba bean yield potential and economic viability will be investigated further in 2020.

Table 2. Plant density (plants/m²) of two faba bean varieties sown at three sowing rates.

Sowing rate (S)	Plant density (plants/m ²)		
	PBA Zahra	PBA Amberley	Mean (S)
140 kg	14	22	18
180 kg	19	28	24
220 kg	26	31	29
Mean (V)	20	27	
Factor	Variety (V)	Sowing rate (S)	Variety x Sowing Rate (VxS)
LSD	6	3	3
P-value	0.029	<0.001	n.s.

Table 3. Grain yield (t/ha) of two faba bean varieties sown at three sowing rates.

Sowing rate (S)	Grain yield (t/ha)		
	PBA Zahra	PBA Amberley	Mean (S)
140 kg/ha	5.8	6.5	6.1
180 kg/ha	6.6	7.4	7.0
220 kg/ha	7.8	7.8	7.6
Variety Mean	6.7	7.1	
Factor	Variety (V)	Sowing rate (S)	Variety x Sowing Rate (VxS)
LSD	2.5	1.2	2.4
P-value	n.s.	n.s.	n.s.